

Clean Copy of Specification Paragraphs as Amended

Clean copy of 2nd full paragraph on page 4 of specification as amended:

This invention relates to an improved method for processing a gasoline, diesel, or other hydrocarbon fuel stream over an extended period of time, which method is operable to remove substantially all of the sulfur present in the fuel stream. Examples of gaseous hydrocarbon fuels which can be desulfurized in accordance with this invention include methane, ethane, propane and butane.

Clean copy of paragraph bridging pages 4 and 5 of the specification as amended:

We have discovered that the presence of oxygenates in the gasoline, like MTBE (methyl-tertiary-butyl ether, i.e., $(\text{CH}_3)_3\text{COCH}_3$), or ethanol, for example, prevent rapid deactivation of the nickel catalytic adsorption of organic sulfur compounds from the fuel stream. Ethanol could be an appropriate solution to this problem since it is non-toxic, is not a carcinogen, and is relatively inexpensive and readily available in large supplies as a byproduct of the agriculture industry. Methanol, which would also extend the desulfurizer bed life, is not preferred since it is toxic; while MTBE is likewise not preferred since it is thought to be a carcinogenic compound, and may be banned in certain areas of the United States in the near future by new environmental regulations. Preferred oxygenates are non-toxic and non-carcinogenic oxygen donor compounds, such as ethanol or the like. When water is an oxygenate included in the gasoline or diesel fuel mixture being desulfurized, the water content of the fuel mixture should be in the range of about 3% to about 5% by weight of the fuel mixture.